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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,765	12/29/1999	MARKO PARIKKA	297-009122-U	1440

7590 03/17/2003

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EXAMINER

SEMBER, THOMAS M

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/473,765

Applicant(s)
Parikka et al

Examiner
Thomas Sember

Art Unit
2875



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 12, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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Response to Amendment

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10, 12 and 15-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiono et al. Regarding claims 23-24, Shiono et al discloses a light pipe 12 comprising: a first surface, said surface including two dimensional patterns 2 having diffractive properties for coupling light out from the light pipe to provide backlighting of a flat panel display by means of at least one light source, said patterns comprising uniform, mutually different areas distributed on said first surface. Regarding claim 28, as broadly claimed the light of Shiono et al is close to the light guide.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-10, 12 and 15-29 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 61-35585 (figure 2). JP 61-35585 (figure 2) discloses a light pipe 1 comprising: a first surface, said surface including two dimensional patterns 7 having diffractive properties for coupling light out from the light pipe to provide backlighting of a flat panel display by means of at least one light source, said patterns comprising uniform, mutually different areas distributed on said first surface. Regarding claim 28, as broadly claimed the light of Shiono et al is close to the light guide. The light emitted from the display is uniform with a distance from the light pipe.

Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Shiono et al or JP 61-25585). (Shiono et al or JP 61-25585) discloses the claimed invention except for the specific fill ratios and period lengths of the diffractive surfaces. It would have been an obvious engineering design choice to modify the diffractive surfaces of (Shiono et al or JP 61-25585) to meet applicant's claimed parameters since the applicant fails to disclose any

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advantage or any unexpected results obtained in using the specific fill ratios and period lengths for the diffraction projections and it appears the projections of (Shiono et al or JP 61-25585) would perform equally well at diffracting light.

Response to Arguments

Regarding the Shiono et al reference, applicant's arguments filed on 02/12/03 have been fully considered but they are not found persuasive. The applicant's arguments in view of Watanabe are found persuasive because even though Watanabe teaches a back light, the reference doesn't teach a light pipe. However the argument's in view of Shiono et al are not found persuasive. The applicant merely argues that claims 23-29 do not read on applicant's claims because Shiono is far from the technological field of applicant's invention. This is not found persuasive because Shiono et al is from the same field (diffractive optical displays) and still teaches the structure of applicant's claimed invention (the diffractive elements and backlighting light pipe). Backlighting is exactly what Shiono et al is doing. This is even supported by applicant's arguments filed on 2/12/03 at column 6, lines 6-12 where applicant states "backlighting means light emerging from the light pipe towards the back side of the display, through the display and further towards the eyes of someone looking at the display.

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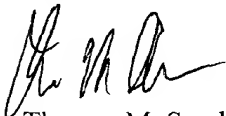
The applicant's arguments that Shiono et al doesn't teach diffractive pixels is also not found persuasive. Applicant argues that "surface elements of Shiono are arcuate sections, which only in cross sectional views can give a false appearance of 'pixels' to the untrained eye." This is not found persuasive by the examiner. As broadly claimed the diffractive elements of Shiono et al are pixels.

Finally, the applicant never addresses the rejections under the JP-35585. As broadly claimed JP-35585 teaches applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Sember whose telephone number is (703) 308-1938. The examiner can normally be reached on Monday - Thursday from 8:00 AM - 5:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached at (703) 305-4939. The fax phone number for this group is (703) 308-7724.

Any inquiries of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4900.



Thomas M. Sember
Primary Examiner

March 10, 2003